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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

10 APR 1984

Memorandum

OFFICE OF
PESTICIDES AND TOXIC SUBSTANCES

SUBJECT: TALON (Brodifacoum) Use at the National Zoo

TO: EEB Files

THROUGH: Clayton Bushong, Chief
Ecological Effects Branch

On 4/6/84 (10:00am to 12:00pm) R. Fairringer, R. Balcomb, R. Matheny and Wm. Jacobs of IRB/RD met with Dr. Peratino and four other veterinarians at the hospital/research facility at the National Zoo. Dr. Peratino had called earlier regarding their experience in the use of brodifacoum (an ICI product) to control rodent pests throughout the zoo complex and at their facility at Front Royal. About a dozen birds have died after alledgedly consuming insects, mainly crickets which presumably had fed on Talon bait placed inside bait boxes. Residues of Talon were identified in the birds by ICI, the registrant. This phenomenon had been experienced at the Philadelphia Zoo three years ago, according to the January 1981 issue of ~~Pesticide Chemical~~ Pest Control News.

Bait stations have been removed from bird enclosures. Currently the product is dispensed only in bait stations in mammal areas. Other rodent controls used involve snap and live traps, warfarin, and glue boards. While rats are present throughout the zoo proper, the primary and most numerous and bothersome rodent pest is the house mouse. The use of Epi-Blok, an acute toxicant with sterilant properties may be used experimentally at the zoo shortly.

Dr. Peratino showed us galvanized metal boxes which measured approximately 4' x 1' x 1' with two entrances on either end. These boxes have a hinged center top with a hasp and lock. Wm. Jacobs suggested insertion of a 2 to or 3 inch baffle about 6 inches inside either end to enhance safety.

We were shown the severity of the mouse problem inside and outside avian enclosures. While the construction of natural-like settings for birds and and other animals facilitates public viewing, it has resulted in ideal habitats for house mice and, in many locations, Norway rats. Workers had just spaded soil inside some bird enclosures to help control certain viral-borne avian diseases as well as disturb mice nests. We saw several mice inside cages being pursued by birds.

In summary, Dr. Peratino and his staff have observed toxic effects to captive birds in the use of Talon, a rodenticide registered for use to control commensal rodents. They have withdrawn its use in aviary areas since they surmise that insects (i.e., crickets) contacting this toxic bait may have accounted for adverse effects to exposed birds. He emphasized that they prefer to use non-toxic controls first, then chemical rodenticides as a last resort.

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Their experience with Talon suggests the hazard of using this product in or near aviaries. He indicated that he will contact ICI and urge testing of Talon using crickets and/or cockroaches and perhaps earthworms to establish what residues result when these organisms are exposed to the bait. This type of study is needed to establish the link, if any, in transmitting the toxicant to avian species. Adverse impact on nontarget mammals has not yet been observed at the zoo. Ultimately additional precautionary labeling may be suggested in the use of this product.

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